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Graduate

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Would they join a fraternity now? See page four

THE NEW GENETICS

Some genetic diseases can now be detected early in pregnancy

by Robbie Salter



Dr. T.A. Doran



Dr. N. Rudd



Dr. L. Siminovitch

photos by Merrin Associates

Of the 2,000 genetic diseases now known, at least 100—including Down's syndrome and Tay-Sachs disease—can now be diagnosed before birth through amniocentesis, a procedure whereby amniotic fluid is withdrawn through a needle from the mother's intra-uterine cavity for analysis.

Prof. Louis Siminovitch, professor and chairman of the Department of Genetics at the U of T, and geneticist-in-chief at the Hospital for Sick Children, points out that "although the potential of amniocentesis for gradually lessening genetic diseases such as Down's syndrome and Tay-Sachs disease is now apparent, many parents will not undergo the procedure which poses certain ethical and moral questions."

Genetic disorders will probably never be completely removed from the roster of human ills: the odds of every individual carry from three to ten potentially harmful genes, and one out of every five persons has a genetic defect that will be carried on to, or through, his or her child. Most people, however, are unaware that they carry a defective gene until they produce a deformed or defective child. Four percent of all pregnancies miscarry within a few weeks of conception, and of these, 50 percent are found to have a major abnormality. In North America, a significant abnormality is found in one out of every 50 children.

Although genetic disease presents a challenge of enormous magnitude to scientists, Prof. Siminovitch points out that amniocentesis offers an effective means of reducing the incidence of severe and debilitating disorders. "Galactosemia, a disturbance of sugar metabolism which leads to a series of abnormalities, including retardation, can be diagnosed antenatally and effectively treated before and after birth," he explains.

Amniocentesis itself is not new. It has been used to withdraw excessive amniotic fluid, to test for Rh compatibility, and to assess fetal maturity. It's only recently, however, that the procedure has been used extensively to detect genetic diseases. Today almost every teaching hospital across Canada supports an antenatal genetic clinic where parents can learn if their unborn child bears a serious genetic defect and where they are given the option of continuing or terminating the pregnancy.

Canada's first interdisciplinary Antenatal Genetic Clinic was formed in 1968 and is located in the College Street wing of the Toronto General Hospital. It draws its staff from the Hospital for Sick Children, Mount Sinai, and Toronto General, all teaching hospitals affiliated with the University. Since its founding, 500 amniocenteses have been performed at the Clinic. Dr. T.A. Doran, a U of T graduate and associate professor of obstetrics and gynecology at the Toronto General who has worked with the Clinic since its beginning, says, "For 95 percent of the patients the news was good."

Trude Keighton, an instructor in the social service department at Ryerson Polytechnical Institute, underwent amniocentesis at the

Clinic. "I was nearly 40 when I became pregnant," says Mrs. Keighton. "I had amniocentesis done because I was concerned that I might have a child with Down's syndrome. I was grateful for the reassurance the procedure gave me then, and I'm grateful now for my healthy two-year-old daughter."

"For the family facing the option of bearing a defective child or terminating the pregnancy," says Dr. Doran, "the support of a 'family' of specialists is necessary." The members of the Clinic represent many disciplines including genetics, obstetrics, pathology, biochemistry, pediatrics, nursing, radiology, and cytogenetics.

Dr. Doran explains that "the commonest indication for amniocentesis, which is done in the sixteen weeks of pregnancy, is in the patient over 35 years of age. For such a patient there is a higher risk of having a child with Down's syndrome than there is in a younger woman." The patient is referred to the Clinic by her obstetrician or her family doctor. At the initial visit, both parents are interviewed and blood samples may be taken.

A second indication for amniocentesis is in the woman who already has a child with Down's syndrome. The chances of her having a second child who is similarly afflicted are three times greater than for the mother who has never had a defective child. In the Clinic, serves, Metro Toronto and environs. Dr. Doran says that only five percent of the patients within the guidelines for amniocentesis—the mother over the age of 35 or the mother with a history of Down's syndrome in her children—are undergoing the procedure.

Down's syndrome, in which one extra chromosome is present, occurs in approximately one in every 600 live births in Canada. The mother over the age of 35 has a one in 280 chance of bearing a child with the syndrome. The chance increases with age to one in 80 in the 40-44 age group, and one in 40 if the mother is over 44. Not all infants with Down's syndrome are born to older women, however; 20 percent of such children are born to women under 35 years of age.

Down's syndrome is named for the British physician, Langdon Down who, in 1866, recognized the condition. Thinking that the infants looked oriental in appearance, Down described them as mongoloid, a misnomer that still persists to some extent in spite of the fact that the syndrome occurs in all races. Whatever the child's origin, he bears the marks of Down's syndrome: slanting eyes and flat facial features, broad hands with a simian crease across the palm, curved little finger, widely spaced toes, and the slow reflexes that attend retardation.

At one time such children were closed away from the public gaze. Before antibiotics, many of them succumbed to infections in infancy. Today, an increasing number outlive their parents and may require institutional care.

While Down's syndrome is nearly always recognizable at birth, Tay-

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facts & faces



Peter Rosenthal and Henry Fong

Fong appeal foiled by academic record

The final academic appeal of failed fourth-year medical student Henry Fong concluded on January 9 when the appeals committee handed down its decision. Mr Fong's appeal was rejected.

Henry Fong was first asked to withdraw from the medical school in January 1974. He was readmitted, failed a clinical subject, and was asked to withdraw again.

The appeal, which continued over several weeks, was high drama. The proceedings were punctuated with frequent, often angry, interruptions from the University's lawyer, John O'Brien, and from Fong's defenders — lawyer Michael Smith and mathematics professor Peter Rosenthal. The latter claimed that Fong's expulsion was the result of personal prejudice directed at him by the medical school and related in part to his racial background.

The committee heard evidence of Associate Dean E. Llewellyn Thomas and past Associate Dean J.W. Steiner concerning Fong's academic record. The evidence consisted mostly of letters exchanged within the Faculty about Fong, and the complexity of the case was illustrated by the fact that O'Brien and Rosenthal frequently referred to the exact same passages in certain key pieces of correspondence to prove opposite arguments.

When finally the seven-member committee had heard all the evidence and spent several weeks digesting it, they came to the conclusion that Fong's academic record was inadequate, and on those grounds he could not be readmitted to medical school.

Simgon finds fossils not near but Afar

"Fewer than a dozen anthropologists in the whole world have found a fossil that age," announced Erdal and anthropologist Bekey Simgon, of a three-and-a-half-million-year-old (thigh bone) she found in December while on an international expedition to the Afar Valley region of Ethiopia.

"We were walking up the side of a hill in an area where one of the students on the expedition had found a bone the day before and I found this one eroding out of the side of the hill," she explained. The well-preserved fossil is definitely of a "homo-like" creature, and is one of many yielded by the region.

Another spectacular find is a human skeleton, 40 percent complete, which has been dubbed "Lucy." In a science where scholars are often forced to draw a picture of a whole skeleton from a few teeth, a bit of jawbone, and, if they're lucky, one or two other pieces of bone, a partial skeleton is a precious find.

The Afar Valley has produced hundreds of well-preserved fossils since it was discovered in the late 60s by French geologist Maurice Taieb. Located 200 miles from Addis Ababa, the valley was formed about four million years



Prof. Bekey Simgon

ago when the lake it once covered dried up. The 100 to 200 foot high valley walls have gradually eroded over the years, exposing fossilized remains of the inhabitants who once lived on the shores of the lake.

Several expeditions have been carried out in the Afar Valley, "providing some of the earliest evidence yet on the evolution of man," Prof. Simgon hopes to put her Afar experiences to good use by leading a Canadian expedition to the southernmost tip of the valley.

Demon nicotine banned from classrooms

At least one group on campus has found a silver lining in the black cloud of budget cuts: The Non-Smokers Rights Association. Since the cleaning services have been reduced, litter left in classrooms by eaters and smokers has become an unpleasant nuisance. As a result the University has asked students not to smoke and not to eat (unless absolutely necessary) during lectures.

Elizabeth Dixon, third-year Victoria College student and president of the U of T chapter of the Non-Smokers Rights Association, couldn't be happier. She has been trying to get the University to pass a ban on smoking in classrooms since last fall. Her group, which numbers about 60 members, has been passing out pamphlets and buttons (GASP — non-smokers have

rights too) in the foyer of Sydney Smith in an effort to get students interested in non-smokers' rights. "We're trying to motivate some peer group pressure," Dixon says.

She hopes professors will make an announcement in their classes about the non-smoking and non-eating rules. Ms. Dixon says that on more than one occasion she has requested that a person stop smoking during a class. Will they stop? "They may not be too charming about it," she admits. "But they usually comply."

And for those poor students who have classes scheduled from 11 until two o'clock — there will be some respite. Instructors may permit students in this situation to have some sustenance, provided of course, that they clean up after themselves.

Student presides over pros and executives

"I think the upper administration considers it more credible to have a student chairman for one of the committees of Governing Council," says fourth year Mechanical Engineering student Tim Buckley of his position during the past year as chairman of the Internal Affairs Committee. He believes students are being encouraged to feel they are participating fully in the Council. Buckley is the third successive student to have found himself chairman of a committee only weeks after first being elected to the position.

After two years on SAC (one as vice-president), was he intimidated by the prospect of chairing meetings whose members include nit-picking professors and hard-nosed business executives? "I wasn't intimidated by the people on my committee. But I was intimidated by the position. I'd never been a chairman before." Buckley also admits that, having run for the Council, "I represent the student viewpoint." It was difficult to abandon that position and be dedicated to being unbiased. "Sometimes I wish I were sitting as a member. You are somewhat limited by being chairman, and it means



Tim Buckley
you sit on only one Council committee rather than several."

In spite of the fact that he spends easily 15 hours a week on Council business, Buckley says he has not fallen behind in his school work. He will graduate in May, already has several job offers and, he believes, high enough marks to consider another career choice, law school.

Who's the Editor around here, anyway?

Life at the *Varsity* is never simple, as the recent election of next year's Editor proved. Reporter Eric McMullan, a third-year Philosophy student at New College, was finally elected by the *Varsity* staff by a vote of 24 to 12 over Ken Wyman, features editor this year. But it took two elections and several surprising turns of events to get him there.

McMullan appeared to be the only serious candidate for the job until the day of the first election. Then Wyman announced his intention to run. And then he did: so hard he garnered most votes. But then things got complicated. Wyman, it appeared, had not gone through official pre-election screening, a requirement of the Board of Directors, a prerequisite for any candidate for Editor. Legally, he could not be declared the winner.

Another election was scheduled and this time Eric McMullan had a two-to-one edge in votes. He became the official staff choice, and was duly approved by the Board.

And that, as they say, settles that.

Fraser will help the sexes get together athletically

In July 1977, U of T's Athletic Department will stride boldly into the 70s by amalgamating men's and women's athletics. The hardy individual selected to carry out the job is Arthur J. Fraser, a man both large in size (6 feet 5 inches, 205 pounds) and long in experience. With 16 years of coaching at the University of Manitoba, and nine as a sports specialist for the federal government's Department of National Health and Welfare.

Mr. Fraser has served as special representative to the 1976 Winter Olympics in Grenoble and at the summer games in Munich in 1972. He is a member of the executive committee for the 1976 Olympiad for the Physically Disabled, which will be held in Toronto this summer.

U of T is one of the few Ontario universities to maintain separate men's and women's athletic departments. But in 1974, a task force under the chairmanship of Governing Council member Gordon Fisher, recommended that it was time the sexes got together.

TAGA detects what's blowing in the wind

Imagine a machine that could detect metabolic diseases by having the patient breathe into it, or one that could detect trace pollutants in the atmosphere. Such a machine is no longer the figment of a scientific imagination. It has been developed by Dr. Barry French of the U of T Institute for Aerospace Studies (UTIAS), in conjunction with Dr. Neil Reid, a chemist who has worked with NASA, and Dr. Adele Buckley, the Institute's first woman Ph.D.

The Trace Atmosphere Gas Analyzer (TAGA), to which U of T holds the patent, is able to detect 100 different organic, inorganics and other matter in the atmosphere at the concentration of one part per billion, by drawing in air which becomes electrically charged, or ionized, by means of radioactive foil. The newly charged trace compounds are transferred to a mass spectrometer, an instrument that identifies each substance by determining its molecular mass.

The scientists at UTIAS are now working with researchers in the Ontario Ministry of the Environment to analyze North York air for smog precursors. "We are particularly interested in detecting trace pollutants such as vinyl chloride, which are carcinogenic," says Prof. French. "Every year new substances seem to be found in the atmosphere that are a cause for concern. We hope that TAGA will be used to assess potential hazards before new industrial processes are installed."

"Once the metabolic make-up of breath has been determined, the machine could facilitate the medical screening of many people in a very short time without requiring the presence of specialists." Its services should be low in cost. Since readings are instant, neither doctor nor patient will have to wait long for results. It is a non-invasive procedure too—no needles, no tubes," says Prof. French.



Blues pucksters pick off CIAU prize

Hockey Blues won their eighth national championship in eleven years by defeating Guelph Gryphons in the CIAU championships in mid-March, but in the process performed a storm of protest and sour grapes from the news media, not to mention the opposition. The problem is that Guelph had beaten the Blues only days before to take the provincial title. How did Blues get into the nationals then? Simple: they were selected to play host to the 1976 tournament last October, thus receiving an automatic berth.

But the tournament was certainly not automatic, and this year's edition of the Blues, a team that many feel is less talented than earlier championship teams, dug deep to prove that when the chips are down, they are tough to beat.

The tournament began on Friday night (March 12) with two games which had no bearing on the results, but were included to determine the final match-ups and to attract as many spectators as possible. On Saturday afternoon, Blues met top-ranked Concordia in the semi-final. John Precious' goal at 10:59 of sudden death overtime gave Toronto an unexpected but deserved 3-2 victory.

On Sunday afternoon, Blues met Guelph in the final, before 3500 enthusiastic fans. A game that could have become a grudge match remained clean and hard fought, but Guelph, after a tough Saturday night win over Calgary, just didn't have it. Blues triumphed by a score of 7-2.

In winning the championship, Blues perpetuated a streak that is almost unheard of in college athletics. The Blues haven't finished worse than second in their league since 1953. And since Tom Watt took over as coach in 1965, they have surpassed themselves: seven first place finishes, eight CIAU championships, and 10 OUA league championships.

Shirley French is new SAC president

Shirley French, fourth year New College political science student, SAC Women's Commissioner, and student representative on the Governing Council (1974-75), has become the second woman ever elected President of the Students' Administrative Council. Her two vice-presidents are second-year Engineering student Doug Gehrt and third-year Erindale political science student Pauline Peden.

Student politics has never been a consuming interest at U of T, as the 13 percent voter turnout confirmed. French won her victory with only 1502 votes of a possible 26,000, but still managed to best her nearest rival, Rob Snell of Victoria College, by about 600 votes.

The first project of the new administration will be a student survey to find out what kinds of services students want from SAC. The election campaign emphasized more active solicitation of student opinion, more and better student services (especially more special events and concerts—which always seem to be popular), and stronger student opposition to educational cutbacks.

"I want students to realize what cutbacks will mean to them as individuals," says French. "Ob-



SAC President French

viously the mass demonstrations haven't been too effective. We'll concentrate on organizing grassroots opposition." She also plans to keep SAC involved with the administration to put more pressure on the provincial government.

SAC's budget of \$300,000 comes mainly from the fee of \$14.50 each student must shell out when he arrives in the fall. As president, Shirley French will not be allowed to enrol as a student.

Sabbatical year spent right here

"I'm a visiting scholar in my own university," says physicist Ursula Franklin, who has chosen to spend her sabbatical year on the U of T campus.

"It's only on a sabbatical like this that one can concentrate where a great university like we have here," says Prof. Franklin. "A professor's daily life is so harassed by deadlines and large classes to be taught that it's not possible to take advantage of the interesting lectures and interdisciplinary discussions taking place. In the usual course of professional life, one is deprived of the very thing one most needs: intellectual stimulus."

Besides attending lectures at Innis College, the Club of Gnu and any others that strike her as interesting, Prof. Franklin is writing a paper on bronze technology for Joseph Needham's 10 volume in his *Science and Civilization in China*. A professor in the Institute for the History and Philosophy of Science and Technology, Prof. Franklin enjoys studying the crafts of ancient people with the modern tools of technology—the electron microscope, the electron probe, and the spectrometer. Noting that a people's hand work tells something of their resourcefulness and their values, she says, "For me the artefact is the doorway to a human being."

Cal Tech prize: two consecutive Erindale winners

"It must be some kind of record," observed chemistry professor Geoffrey Ozin of being the second Erindale professor in as many years to be awarded the prestigious Sherman Fairchild Scholarship. The award will enable him to spend eight months at the California Institute of Technology, where he was preceded by last year's winner, renowned geophysicist Professor Tudo Wilson.

The Sherman Fairchild Scholarship is awarded to 10 scholars each year at Cal Tech, and its aim is to bring together the best talent in science, engineering and the humanities on an institute-wide basis. Prof. Ozin, who is obviously thrilled at the opportunity to have access to the excellent facilities at Cal Tech, hopes to further develop his research on the cryochemical reactions of transitional metal vapours. To the uninitiated, that means heating the metals to the point where they become gaseous, and "freezefreezing" the vapours in order to study the chemical make-up of the totally different resulting substance. The reason for freezing is that the products are too unstable to be studied at ambient temperatures.

Innis, shoe laces and a kitchen sink

The official opening ceremonies of the long-awaited Innis College building at St. George and Sussex were typical of the inclement. Instead of cutting the ceremonial ribbon, Principal Peter Russell and staff members Arthur Wood and Lynn McLean tied a pair of shoe laces—a reminder of the shoestring budget on which the College was built.

The \$1.8 million building, designed by Toronto architect Jack Diamond, is an 'in-fill' structure combining the nineteenth century house which stood on the site with a modern four-storey structure. The College was built without any direct government assistance and is the first new academic building to be erected on the main campus since 1971.

A moving parade led by the Lady Godiva Marching Band opened the festivities. Staff and students marched from the temporary building at 63 St. George to the new site, carrying whatever furniture they could manage. One notable item is an old-fashioned kitchen sink meant to be emblematic of the Kitchen Sink Fund organized to defray the cost of furnishing the new building.

After the parade and the speeches, 400 jubilant Innis staff, students and neighbours crammed into the pub for some serious post-ceremonial celebrating.



DOWN BUT NOT OUT

Despite the fact that almost everyone except their members frowns on them, fraternities are still with us.

by Sheila Robinson Fallis



The weekly Saturday night meeting of the Kappa Alpha Society in the 'Kap rooms' at 27 Wellington St. East on February 11, 1899.

When I attended U of T in the late 60s fraternities were definitely "out". Somehow being against the Vietnam War, for a cleaner environment, and in favour of co-ed dorms, didn't jibe with belonging to a secret and exclusive society.

But there were fraternities on campus, and each had its own identity: Kappa Alphas had pretensions of progressing from a influence to influence, Delta Kappa Epsilon were "jocks", and there always seemed to be hundreds of them about; Alpha Deltas were private school types, rich, well-mannered and not brilliant; Zeta Pas were the campus wild men. One of their songs reinforces the image they astoundingly cultivated;

Oh I'm a member of Zeta Psi,
I like my Johnnie's hair, and Haig,
I like my Johnnie's hair, and
The touch of my lady's leg...

And then there were the drinkers, the "druggies" – and yes, the scholars (although oddly enough I can't remember meeting many of them).

The eight women's fraternities – strictly speaking there are seven fraternities and one sorority – were

less well-defined, perhaps because with a total membership of only 200 and without the inducement of frequent parties, they were almost invisible a campus group. I can remember going into the Alpha Phi house once and being reminded of my status as Girl Guide camp; Kappa Gamma was numbered among a corner on blond Victoria College women, and poor Delta Gamma was down to a handful of active members. One of the DG songs goes like this:

Well, well, well Hanna, my Delta Gamma,
She has a shape like a baby grand piano,
She's not too nifty,
She weighs two-fifty,

But fat girls now and then are relished by the
best of men.

Perhaps in those dawning days of what has been dubbed the "woman's lib movement" that type of humours was a little bit off appeal to large numbers of undergraduate women.

But it wasn't just Delta Gamma that was having trouble finding members. It was all the frats, and their decline was not a phenomenon of the late 60s,

but something that had happened gradually after the Second World War, when returning veterans were encouraged to attend college and U of T became less and less the preserve of the sons and daughters of the well-to-do.

Numerically, frats reached their zenith at U of T in the late 20s when nearly one undergraduate in four belonged. During the war the proportion declined to one in five, in the 50s to one in eight, and now it stands at a minuscule two or three in one hundred. Interestingly, the number of fraternities has declined from a high of 80 in about 28, and several of these are struggling to survive.

Considering they form such a small group on such a large and diverse campus, fraternities still provoke a surprising amount of vituperation. Many undergraduates and alumni think they're elitist, silly, sexist, and worse. The fact that many of these detractors know of fraternities only by reputation makes their condemnation no less heartfelt, and in most cases, no less accurate.

Like so many things, our image of frats has been largely shaped by grade-B Hollywood movies based

on a hack writer's third-hand idea of Ivy League College fraternities. The image is of tall handsome men dressed in white ducks and tennis sweaters, leaning nonchalantly against oak mantles, beer mugs in hand, singing hearty songs and making eyes at their sweethearts, who probably belong to sororities. The characters are always wealthy, clever and sophisticated. They bear the unmistakable aura of success.

In spite of the best efforts of the movie moguls, though, fraternities have a bad name in Canada. They have never managed to establish themselves here the way they have in the U.S. colleges, where they are often responsible for most of the student housing and all of the intramural sports. Perhaps it is because as a people Canadians are not joiners, and our practical, down-to-earth outlook makes us wary of anything which boasts mystery, ritual and hocus-pocus.

At any rate frats only operate on a few Canadian campuses: U of T, McGill, Western, UBC, Alberta and Manitoba. Few are exclusively Canadian, nearly all of them preferring to affiliate with the larger U.S. organizations. Alpha Omicron fraternities flourished until 1934, when an unfortunate fire and accident resulted in their being banned forever. Even at U of T, considered a fraternity stronghold in Canada, they have had at best a spotty career. At one time they were outlawed at Trinity and Victoria Colleges, and until the early 60s women at the two were not allowed to join because too many were having their hearts broken when rejected by the frat of their choice. But the rule has not been enforced for the past dozen years. So few want to join any more that hearts need break no longer.

Annual mating dance

The fraternity season starts in the fall. The opening ritual, known as rushing, is the annual mating dance between fraternity members and prospective joiners. It lasts a frantic four to six weeks and consists of the members inviting selected individuals to lunches, teas, parties and get-to-know-each-other sessions. In the end, the frat invites anyone interested in joining into their ranks. There is a legend that one alumna put it, "it means each chapter has a few weak links." A few years ago the women's governing body, the Panhellenic Council, passed a rule that none of its members could have more than 36 active sisters at any one time. That helped all eight survive those grim years when only 50 women in the whole University showed interest in taking part in the rushing ritual.

Men's fraternities used to be very choosy. In fact they prided themselves on it. The 1925 president of Alpha Delta Phi says, "I think they should be selective, not necessarily in terms of wealth or position, but in terms of character. I know many an Upper Canada College guy was turned down because he didn't measure up to the standards."

Times have changed and most frats are happy if they get enough new members to replace those that are graduating.

Ross Arnold, an alumnus of Phi Gamma Beta, is still trying to prop up his sagging chapter five years after graduating. "Dope really destroyed the place," he says. "We'd have a party and everyone would just go upstairs and drink up. Lots of guys dropped out and the house got very weak. Now we really have to work to recruit new members."

The dreaded blackball

Rushing is followed by the bidding, or selecting of new members. And yes, blackballing does exist in some fraternities. If even one member throws a black marble into the usually secret ballot box, poor Bret won't get into the frat that Dad and Uncle Ned have told him about since he was five. The rationale behind the secret ballot is that to have the brothers openly arguing over whether they want any given rushes or not is hard on fraternal unity. However, long before the black marble ever comes into play, young Bret will probably have realized he would be better off trying his luck with some other secret society.

After the rushes are bid, they are pledged in a very secret ceremony with promises of secrecy and fidelity. A short time later comes the most important ritual—the secret initiation rites. Physical hazing, never employed by the women, has largely been dropped by the men because it was giving them a bad reputation. Several students were killed in the U.S.; and rolling a peanut across the lobby of the Royal York Hotel with your nose, clad only in a pair of boxer shorts, and other such high jinx, is out of style. However, there is a widespread and stubbornly persistent rumour that one fraternity still brands its members as part of the "fun" side of initiation. Most frats indulge only in mind

games and emotional manipulation of their pledges which supposedly creates an eternal feeling of brotherhood amongst the participants.

The "serious" part of initiation is the final ceremony, during which the deep dark secrets of the brotherhood/sisterhood are laid before the neophytes. The ceremony is usually a rather bizarre mixture of Eastern or Greek mythology, astrology and quasi-religious symbolism. There are often special rooms and costumes or robes which are reserved for these occasions. Candles, crosses, oil flasks, chains, chalices and other ritualistic paraphernalia adorn the room. In this atmosphere the new member is welcomed into the chapter. It is not to be undertaken with smirking face or humorous asides. As Sally Vernon, Alpha Gamma Delta 512, told me: "The initiation service is not a lark. It is very serious, very moving and very beautiful." "Rather like a marriage ceremony," was the way another alumna put it.

The best bashes on campus

What do fraternities do besides perpetuating themselves? They have parties, lots of them. And even the most rabid anti-fraternity undergraduates has to admit they give the best bashes on campus. With loud bands, strobe lights and freely flowing liquor and beer, frat parties are an integral part of many an undergraduate's weekend. I remember that in the 60s, there were occasional police raids which only added to the excitement. Some fraternities were known to have good escape routes—usually a basement window—and nothing heightened the atmosphere more than a rumour that the police were on their way.

Fraternities provide the opportunity to learn skills which are not taught in school: leadership, business management and public speaking. Every member holds some office, whether social chairman, business manager, rushing chairman, house manager, secretary or president of the chapter. The business manager is responsible for managing a yearly budget in the range of \$10,000 to \$20,000. The house manager must look after hiring help if the chapter can afford it, keeping the rooms lit and maintaining the household services.

member of the Kappa Alpha frankly admitted his group was not involved in any charitable work at all.

Most members seem to approve of the U.S. connection on the grounds that "you can go to any chapter of your frat in the States and be treated like a king," and there are scholarships made available through "the head office". However, at least one alumna sees it differently. R.H. Sadler, Zeta Psi 479 says, "The international side of it is ridiculous. We used to dutifully send our dues to the International Chapter although we resented it mighty. I bet they just refuse to do it know."

It is true. They will need money. And one of the few things they receive in return in most cases is a subscription to the fraternity magazine which, according to Gamma Phi Beta and Panhellenic president Martha Robinson, "hardly ever says anything about the Canadian chapters because we're so small."

Devotion to the International Chapter caused one of the bleakest episodes in fraternal life at U of T. In 1959 the Panhellenic Council was accused of racial discrimination when a black student was advised, midway through rushing, that she would not be pledged by anyone. She told her story to the *Varsity* and the ensuing scandal almost resulted in losing fraternities banned. It did result in their losing any status they had as a university group. The excuse offered by the Council for its behaviour as recorded in the *Varsity* was "such a revolutionary action as admitting a Negro... should not be initiated by a small insignificant Canadian chapter." It seemed that although non-Caucasians were not expressly disallowed, the frats still felt the influence of the deep South, where many of them were originated in the later nineteenth century.

Active members feel their frat, besides providing social life and international connections, will give them good business connections. One Kappa Alpha confidently told me: "If I were being interviewed for a job, and the person doing the hiring were a brother, he'd most likely show preference for me." Such faith is less unequivocally endorsed by fraternity alumni, many of whom laugh outright at the whole idea. But as many take it seriously. An obstetrician told me that all his fraternity brothers sent their wives to him, thereby helping him get his practice going. Another confided that one of his Phi



Lambda Chi, 1975. Two group shots are taken each year—one for posterity and one for fun.

The most onerous job falls to the president, who must generally have the respect of all the members, and chairs the weekly Monday night meetings, a tradition at all the Toronto houses. Nearly all the graduates I talked to expressed fond memories of them as being a ritual which genuinely fostered a sense of brotherhood. And they are well run too. According to Richard Sadler, Zeta Psi 479, the meetings at his fraternity were "great fun—lively and articulate." Usually, each member is expected to contribute, and it gives many the first opportunity they have ever had to practise the art of speaking in front of a group.

Fraternities, especially women's fraternities, are quick to explain that they are more than social clubs. Each women's organization supports a charity, such as the Heart Fund, and this is taken very seriously as part of their fraternal commitment. By and large, the men I talked to seemed somewhat less charitable. One undergraduate alumna had to rack his brain for several minutes before he remembered that his chapter had given a Christmas party for underprivileged children one year. And a current

Gamma Beta brothers sold over a million dollars of life insurance his first year in the business "just by putting the touch on his brother."

Fraternities seem to foster close and long-lasting friendships. Many alumni still number their brothers or sisters among their closest friends 10, 20 and even 40 years after graduation. Why is there a fraternal feeling long after the backslapping, beer-drinking, demonstrative undergraduate days? An alumnus of Alpha Delta Phi explained, "People of like attitudes and background have similar interests, especially among private school kids. Their life expectations are similar. If I'd been asked to join a frat where the members were from a different social class, I probably wouldn't have been interested in joining."

Undergrads who haven't joined a fraternity complain that they are only available to the wealthy. This is not entirely true. While some memberships cost as much as \$250 a year, others are as low as \$100. The women's are inexpensive, often as little

continued on page 12

Canada's dowager nursery school turns 50

The University of Toronto's Institute of Child Study will mark its fiftieth anniversary with a commemorative dinner on June 3 and an Open House on June 4.

The Institute was founded as the St. George's Nursery School in 1926, with eight children and a small staff, as a laboratory for the study of "the social and social development of young children". It was the first nursery school in Canada and one of the few laboratories of its kind in North America.

Within two decades, training of professionals in child-related fields, psychological research and community consultation became primary activities of the Institute. The "security theory" formulated by the Institute's founder, Professor William Blatz, integrated much of the early work. This approach places a premium on children assuming responsibility for their own behaviour. According to Prof. Blatz, responsibility is fostered in an environment containing consistency, clear expectations, understanding and affection, but free of punishment in the traditional sense. The child-rearing practices expounded by Prof. Blatz contrasted sharply with the attitudes of most parents and school authorities of the time. The parents of children enrolled at the Institute school were, therefore, expected to attend parent education sessions. They also contributed to the research by conducting observations of their own children. Prof. Blatz conducted similar research with the Dionne quintuplets.

The war years saw most of the institute staff in Birmingham, England where they conducted a training demonstration centre for British nursery workers. Special provision for the needs of children evacuated from their city homes were added to the Toronto training program.

After the war, teaching of graduate students was conducted in front; the postgraduate Diploma in



You can learn some pretty good stuff here at the laboratory school.

Child Study was introduced in 1946. The Institute moved to its present home, a large house on Walmer Road bequeathed to the University by Leighton McCarthy. A new wing enabled the lab school to extend its program through grade six; the garages were converted to experimental rooms. An 18-year follow-up of infants raised by mothers who had been conducted by Betty Flint.

The Institute today enrolls just under 100 graduate diploma students. In their two-year program, they elect to concentrate in early childhood education (leading, since last year, to provincial teacher certification) or in child assessment and counselling (usually prior to employment in school, hospital or service agency psychological services). In 1971, the Institute came under the jurisdiction of the Faculty of Education. The laboratory school has an enrolment of 200 and staff of 14.

The anniversary Open House is open to the general public as well as professionals in the field. Past lab school students, parents, staff, students and friends wishing invitations to the commemorative dinner are invited to contact Miss E. Hamblin (416-343-3111). If they are missed by the Anniversary Committee,

NOTA BENE:

The theme of this year's annual Alumni Advisory Conference, to be held on Friday, May 7, and Saturday, May 8, will be "Academic Excellence: Its Price and Value." The keynote address will be given by Dr. H. Ian Macdonald, President of York University and outspoken critic of recent Ontario Government cutbacks in university funding.

The conference will open with a workshop for delegates from international branches outside of Metropolitain Toronto. This workshop will explore the current state of the university, program ideas, and the image of the university as seen by the delegates.

On Friday evening, beginning at 8 p.m. at the Town Hall Theatre,

Innis College, the Moss Scholarships will be awarded and Dr. Macdonald will deliver his keynote address.

Saturday morning the conference will continue with a panel discussion at the University of Victoria College, beginning at 9:15 a.m. The conference will be immediately followed by the University of Toronto Alumni Association's annual general meeting.

For further information on this year's Alumni Advisory Conference, contact the Department of Alumni Affairs, 47 Willcocks Street, or call 978-8590.

The Department of Biochemistry is planning a "reunion" later in May in honour of Professor Jeanne Manery Fisher. All colleagues, friends and former students of Dr. Fisher who would like to be notified and take part in the festivities, please call or write to: Ms. P.A. Staton, Department of Biochemistry, 978-2700.

Another 10-session course for alumni considering a return to the work force will be held beginning next October. The course includes such topics as identifying needs, assessing qualifications and skills, evaluating family responsibilities, interest testing and locating and securing a suitable job.

Five such courses have been held this year and have proved extremely popular. Enrolment will be limited in order to ensure personal participation. Watch for further information concerning registration for the Second Careers program in the next issue of the Graduate.



You make things happen
our thanks to all
supporters whose interest
and
generosity have provided
90% of this year's goal

And a reminder to others
that the Varsity Fund campaign
won't be complete
without **YOU**

1975/76 campaign deadline: APRIL 30, 1976



Why be parochial about international poetry?

To the Editor:

As a student at the Faculty of Education of the University of Toronto who very much enjoyed the Hart House International Festival of Poetry, I wish to express disappointment in your review of this event. This was an international occasion, featuring poets from nine countries. Your article features six photographs. Non-Canadian poets are pictured in only two of these. Of the English-speaking poets who read at the Festival, the one who is perhaps most internationally distinguished, namely Thom Gunn, was not even mentioned. Two other internationally known non-Canadian poets, Peter Porter and D.J. Enright, were not mentioned either.

The omission of these three names can only be described as provincial. If the Hart House poetry festival is to be a festival of mostly Canadian poetry, let it be that and keep it that. But if it is to be a genuinely international event, let our commentary not be narrow and parochial.

Hamish Guthrie,
Toronto

Ancient history

To the Editor:

I have just received the Winter 1976 issue of the *Graduate*, and was very disappointed to find that I have already missed many of the events which I would have attended had I known about them.

Possibly you can advise me where I can obtain a list of coming events in advance of the events.

Carl W. Faber,
Toronto

An up-to-date listing of campus events is published in the weekly *Bulletin*, available Fridays in newsboxes located throughout the campus. Ed.

Brother whom?

To the Editor:

It was a pleasant surprise to receive a copy of the *Graduate* especially under the alias - Brother Ronald - Congratulations on the thoroughness of your research department.

Unfortunately, under the present circumstances the best I can do for my Alma Mater is to wish her well with God's continued blessing on her future. Down through the years she has been a dutiful and prolific Mother. May her Youth and fruitfulness be ever renewed to the greater glory of God and Country.

(Brother) Ernest J. Gauthier '37,
St. Peters T.T. College,
Akura, Nigeria.

Dents Dean dissents

To the Editor:

"The only dental school of its kind in the province," you say" (Volume III, No. 2, Page 13). Well now, I'm a colleague of a great many people who would take, at least, congenial issue with you. In fact, there are 218 undergraduate dental students, 7 graduate students in Orthodontics, 32 full-time faculty and 67 part-time faculty (exclusive to the dental school) and approximately 100 jointly-appointed full-time faculty within the six Basic Science Departments common to the Faculties of Medicine and Dentistry who are almost certainly are very actively associated with the Faculty of Dentistry of The University of Western Ontario.

Concerning our responsibilities for continuing education, we have 23 on-campus courses listed for the 1975-76 academic year. In addition, we shall be supplying lecturers for at least 25 to 30 professional groups and will be involved in a minimum of six off-campus two-day seminars. Not bad for a non-existing faculty.

Although I have the warmest regard and deepest respect for my alma mater, I'm not quite ready to agree she's "the only school of its kind" in Ontario. We may be only number two. But we do try hard.

Wesley J. Dunn '47,
Dean of Dentistry,
The University of Western Ontario.

Let's hear it for the arts!

To the Editor:

I read with interest the Winter issue of the *Graduate*. I am pleased to see an issue that is informative of what is happening on campus and is done in an interesting format.

I am particularly concerned about the arts, and the neglect they receive in the *Graduate*. Last year the International Festival of Poetry was short but to the point and well documented with photographs. At Hart House, we were all quite involved with the festival and what coverage it received in the press was most welcome.

The article about Adele Wiseman by Sheila Robinson Falls was well written. I fear that not enough members of the University community are aware of the Writer-in-Residence and the role of such a position. Ms. Wiseman sounds like an interesting addition to the University.

The article about Kay Graham and her visits to Baffin Island was interesting, too. I feel that it is most important that people are aware of what is happening in the arts, for public support is certainly needed in this area.

Thank you for the enjoyable reading.

Judith R. Schwartz,
Program Adviser
Hart House

Regional branches are coming alive

The University has a great need for its alumni. Because of the threats to its well-being and to the well-being of its students, now and in the future, it is looking for loyal graduates to help offset the disastrous effects of inflation and diminishing government support. To do this, the University is trying to strengthen and, where necessary, renew its bonds with many of its 180,000 alumni. Mary Brown, assistant director of Alumni Affairs, is attempting to bring this about by carrying out a two-phase plan to revitalise alumni branches in 15 Ontario centres.

In the first phase she travelled to eight cities - North Bay, Peterborough, Windsor, London, Ottawa, St. Catharines, Guelph, and Sudbury - and met with four or six alumni to talk about starting an alumni branch association in their area. In the second phase of her campaign Mrs. Brown will visit Sault Ste. Marie, Sarnia, Hamilton, Muskoka, Kingston, Brantford and Barrie.

A branch organization acts as a liaison between U of T and its alumni, fosters a sense of fraternity among former students, and keeps them informed of and responsive to the needs of the University, interprets the community and professional interests of its members.

After Mrs. Brown has met with prospective branch associations, they attempt to arrange a second, and larger, meeting which will form the basis of the branch organization in their particular area. With the aid of Mrs. Brown, they will establish their own ongoing programs which reflect their particular interests and concerns about their community and about the University. Each branch will be a forum for the expression of alumni opinion, and each May, representatives will be invited to the University to meet and formulate solutions on vital issues. According to Mrs. Brown, one of the talked-about issues at the initial branch meetings has been admissions policies. Alumni are

concerned about the question of accessibility and its ultimate effect on post-secondary education.

The results of Mrs. Brown's campaign are already being felt. A branch is forming in North Bay and President Evans has accepted an invitation to speak at their regional meeting. Mrs. Desdemona Morton of Edmund College will perform similar honours in Peterborough at the end of April.

Whether or not these branch organizations really get off the ground depends on the alumni, their sense of responsibility as graduates to ensure the best future of Ontario universities and in particular the University of Toronto. President Evans has laid out the task before them very clearly by saying: "Never in recent history, has there been a time when this and all Ontario universities stood in greater need of the support and understanding of their graduates."

If you are in an area being visited by Mary Brown and wish to be informed about your new branch association, write or telephone her at 47 Willow Street, Toronto, Ontario M5S 1A1, (416) 978-8990.

To honour by degrees

In May of this year, the Committee for Honorary Degrees will meet to consider candidates for the award of honorary degrees at a Convocation to be held on March 15, 1977, to mark the Sesquicentennial Year. Members of the University community are invited to submit names of possible candidates along with a biography outlining the career of the candidate and a detailed statement of reasons for the nomination, to the Secretary of the Governing Council, Sincere Hall, University of Toronto. Nomination forms may be obtained from the Governing Council Secretariat. The deadline for nominations is April 30, 1976.



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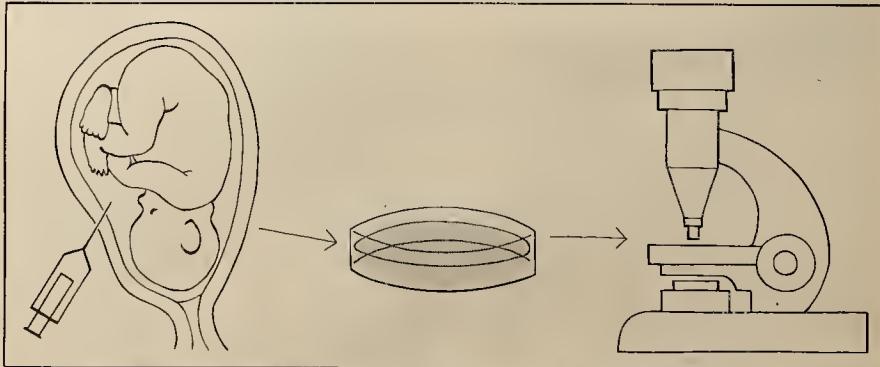
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The three weeks can be trying, but most of the time the news is good

continued from page 1



Fetal cells are taken from the amniotic fluid, grown in tissue culture, and three weeks later the activity of enzymes is measured by microscope.

Sachs disease, another disorder that can be detected antenatally, is not manifest until the child is several months old. Dr. J.A. Lowden, director of neurosciences research at the Hospital for Sick Children, is a biochemist with a special interest and wide experience in caring for children with Tay-Sachs disease and similar genetic disorders.

"Tay-Sachs is a severe genetic disorder that leads to progressive degeneration of the central nervous system, retardation in infancy, and death at three or four years of age," says Dr. Lowden. "Parents in whom only one of the two copies of the gene is defective, will not have the disease, but their children, with two bad copies will. Through biochemical assays on blood and tears, we can screen for carriers and find the couples who carry one defective gene."

In 1880, an English ophthalmologist, Warren Tay, first observed the red spot on the retina, characteristic of the child suffering from Tay-Sachs disease and in 1887 pathologist Bernard Sachs described the other symptoms. But it was not until 1969 that the enzyme defect in the disease was described, making it possible to diagnose the disease antenatally and to detect the carriers.

Just as sickle cell anemia is more common among blacks than among other races, and thalassemia is peculiar to Greeks, so Tay-Sachs disease has a high incidence among Jews, and is 100 times more common in Eastern European Jews than in others. By chance immigration patterns, Toronto has the highest rate of Tay-Sachs in the world. "Through amniocentesis," says Dr. Lowden, "we know 60 percent predictable whether a child will have the disease or not. Previously, we could only tell the parents carrying the defective gene that their chances of bearing a defective child were one in four. Today they have the option of terminating the pregnancy and trying again for the three-quarter probability of having a normal child."

Of the 30 patients that Dr. Lowden has referred to the Clinic, 13 were

"at risk" for having a child with Tay-Sachs disease, and two of the fetuses proved to be affected.

The day before amniocentesis, the patient is examined by ultrasound scanning at Mount Sinai Hospital. "Through ultrasound scanning," explains Dr. Murray Miskin, a U of T graduate and assistant professor of radiology, "we can locate the placenta to make sure that it is not penetrated during amniocentesis. We can also detect abnormalities in the placenta, uterus, and fetus."

Dr. Miskin explains that a small hand-held transducer is passed over the patient's abdomen. Sound waves from the transducer pass through the body from one tissue to another and echoes are reflected back to the transducer where they are processed on a computer which is reflected on a screen. "Ultrasound has the advantage of being 'non-invasive' - no needles, no tubes - and at the levels of energy used, harmless to the tissue," explains Miskin.

The samples of amniotic fluid are examined in the cytogenetic laboratories at either the Hospital for Sick Children or the Toronto General. Dr. H. Allen Gardner, an assistant professor in the Department of Anatomy, who is in charge of the Toronto General laboratories, explains that the amniotic fluid is placed in tissue culture flasks where cells proliferate in the warmth of an incubator for three weeks. They are then "harvested" and their chromosomes examined. "For the patient," says Dr. Gardner, "the three weeks of waiting can be trying, but most of the time the news is good. We can tell the parents the sex of their infant, but that's not the purpose of amniocentesis - neither is sex selection."

Dr. Norreen Rudd is in charge of the cytogenetic laboratories at the Hospital for Sick Children where a family's genetic profile can be carefully examined; when a child from a family with a genetic disease reaches the age of reproduction, he or she can be counselled on the risks of having a defective offspring.

Dr. Rudd, a pediatrician and

geneticist, sees amniocentesis "as a genetic tool, a means of monitoring a pregnancy, and not a pathway to abortion. Many of the parents are older; they may have married late, may be a second marriage, or they may have delayed having a family until the mother's career was established. And although the families will have reflected seriously on the procedure, they would never undergo the procedure without the support of the Clinic."

Betty Youson, the Clinic's nurse co-ordinator, sees the patient from the first visit, through amniocentesis, and abortion, if it is chosen. "At first," says Mrs. Youson, "many patients are confounded at the responsibility of choosing between aborting a defective fetus or continuing the pregnancy. They will often vacillate between feeling guilty and thinking they've acted in a rational and socially responsible manner."

To detect other fetal defects not manifest through amniocentesis, Dr. R.J. Benzie, a member of the Clinic team and a lecturer in obstetrics and gynecology at the Toronto General, uses a fetoscope, a fibre optic device which is inserted into the intra-uterine cavity to visualize the fetus. The fetoscope is used to discover certain musculoskeletal disorders, such as arthrogryposis, a serious muscle disorder not revealed through amniocentesis. "In the future," said Dr. Benzie, "we hope that the fetoscope will be useful in administering drugs to the fetus and in taking samples of blood for diagnosing such diseases as thalassemia, sickle cell anemia, and possibly hemophilia."

In the realization that there are no legal guidelines in Canada for a procedure such as amniocentesis, and that we have yet to resolve other dilemmas of a moral and ethical nature, scientists and society are considering such sensitive questions as whether parents should be discouraged from bringing children into an already crowded world; who will decide whether the results of mass screening for genetic disease should be kept confidential or made generally

available; and how should made children with an extra y chromosome be guided - should it be confirmed that they do have a greater propensity for crime and violence.

Prof. Siminovitch, who points out that genetic manipulation is not yet widely practised, says that "we have a unique opportunity to predict how genetic discoveries will proceed, and to determine how to use them for humanity's optimal use." Prof. Siminovitch has been among those who have fostered open discussion in the public forum on the subject of genetics.

Prof. Abbyhan Lynch, a member of the Department of Philosophy in St. Michael's College, often takes part in such discussions. "The university, with its diversity of traditions and interdisciplinary resources," she says, "is best equipped to speak to society about the new trends in genetics."

Prof. Lynch says that for 95 percent of the patients, amniocentesis is a routine and safe procedure. "But for the other five percent, it means taking steps to correct or prevent suffering, and for those who oppose abortion, new approaches will have to be created." She cites the stimulus the Jehovah's Witnesses gave the medical profession in refusing blood transfusions. Doctors were forced to find new methods of treatment that were consonant with the religious tenets of the group, "she says.

"We shall need intelligent, compassionate counsellors who are both trained and innately gifted," she continues. "There is a great need of those who feel ambivalent about abortion; those whose religion forbids it; and those who attach a stigma to being the bearer of a defective gene. We shall also have to establish certain priorities. For instance, will it be more important to spend the public's money on behalf of amniocentesis, or on an anti-smoking campaign?"

Prof. James Reed, associate professor of pastoral psychology and counseling at Trinity College, sees a need for fuller discussion on abortion before the issues surrounding amniocentesis can be consid-

dered. "I believe that abortion is appropriate in certain circumstances, but I am concerned about whether the individual faced with the option of abortion is actually receiving adequate counselling—both before and after the crisis," he says. "I wonder, too, to what extent the individual's conscience is counselled."

Prof. Reed also points out that in the ancient world, science was a means of understanding nature;

whereas today, science is conceived as a power that controls nature—a power that is being questioned. Prof. Reed quotes from C.S. Lewis in *The Abolition of Man*, "... if any thing really alters us by eugenics and scientific education, the power to make its descendants what it pleases, all men who live after it are the patients of that power. Each new power won by man is a power over man as well".

Of research in general Reed says, "I do not favour censorship of any

kind. The 'truth' that results from research is often shielded from the public. Furthermore, today, in a world that has great needs and limited resources, we must examine carefully how we spend money. We must also guard against developing any insensitivity to suffering that will foster injustice and disorder among people."

Reed also points out that mankind has spent thousands of years trying to relate to God with a

resultant mixed variety of wisdom. For those who may be forced "to play God" in the new genetic advances, Reed asks how man will treat man, especially in view of his innate capacity for self-destruction. "We have to examine very carefully any power that alters what has been entrusted to us in Creation," says Prof. Reed. "Furthermore any understanding of mankind that eliminates differences is open to serious questioning in terms of what it means to be human."



Prof. J. J. Reed



Dr. J. A. Lowden

Georgian Bay's professorial paradise

by Halley Thomas

Back in 1897, Prof. W.J. Loudon, son of an early President of the University, and himself a "born promoter and salesman", enrolled a few friends and started a summer colony on Georgian Bay for U of T professors. It was called the Madawaska Club and became, as one newspaper article had it, "a paradise for the intellectual elite", a description that still may be said to apply today.

Among the earliest members, all of them inspired by "the Canadian affection for pioneering and

the Canadian love for forest and山水", were Chancellor Nathaniel Bataille, W. M. Christie, the Rev. Dr. F.H. Wallace, Prof. C.H.C. Wright who, as professor of architecture, was soon providing advice on cottage design; Dr. John Galbraith, Dean of the School of Science; and J.T. Clark, an editor of the Toronto Star and father of the essayist Greg Clark; many of whose choicest pieces are about the Madawaska Club's environs and people.

Rock Lake near the Madawaska River in Algoma Park was the site of a granite quarry, but thanks to the demands of lumber companies the land could not be acquired and so Home Bay on the eastern shore of Georgian Bay was chosen instead—not without objections from some charter members, because the site was not in any way possessing. Although it had long been known to the Indians who had used it as a camping ground and route into the "secret lands" of Muskoka, "the region was desolate.

had been recently cut over by lumbermen, and owing to forest fires presented the appearance of a mass of rank-keels" as the story relates. Also, while the waters teemed with fish—bass, pickerel, herring—and the woods with blueberry bushes, there were some other less than desirable local residents—mosquitoes, black flies, brown bugs, porcupines, rattlers and enormous fox snakes. Furthermore, with no road anywhere near the vicinity a long journey by boat was entailed.

Notwithstanding, almost 3,000 acres were acquired, including a number of islands, and on a flat rock, in the space of about three weeks in 1898, a club house was erected. Early in June the first domestic parties arrived. Charges at

camping were 75¢ per day.

Attention retired alumni

Because of the enthusiastic response to its November Seminar, "After Retirement", the Senior Alumni Sub-Committee of the University of Toronto Alumni Association is planning a variety of programs that will be of particular interest to alumni and their friends who are or are about to be retired. To assist the Sub-Committee with its planning, all senior alumni are asked to fill out the following questionnaire and return it to:

Senior Alumni Sub-Committee,
Alumni House
47 Wilfcocks Street,
TORONTO MSS 1A1

QUESTIONNAIRE

1. Would you be interested in a modestly priced, daytime university lecture series for retired alumni?

YES NO

2. If your answer to 1 is yes, would your major interest(s) be:

International Affairs Science The Arts
Social Sciences Canadian Studies
Other suggested topics

3. Would you be willing to participate in a volunteer program that would make the talents of retired alumni available to the University and the Community?

YES NO

Particular talent(s) _____

NAME: _____ PHONE: _____

ADDRESS: _____

FACULTY & YEAR: _____

ALUMNI TOURS GREECE AND THE GREEK ISLANDS

Presentation by Mrs. Hadassah Rosenberg, Archaeology Specialist, School of Continuing Studies, introducing Alumni Tour of Greece and the Greek Isles. Late August—early September, 1976.

DATE: Tuesday, April 27, 1976

TIME: 8 p.m.

PLACE: Music Room, Hart House

PRICE: No charge.

Refreshments will be served.

R.S.V.P. Alumni House at 978-8990.

Campbell to head U of Manitoba

Prof. D.R. Campbell, Principal of Scarborough College since 1972, Rhodes Scholar and U of T alum, will leave Toronto on July 1 to take up his new position as President of the University of Manitoba. He replaces Dr. Ernest Sirluck, another U of T graduate and former staff member, who has been President of U of M since 1970.

This is the second time in less than a year that a Toronto staff member has been selected president of another university: Provost Donald F. MacLennan, now Prof. Sirluck and Campbell, was both a U of T alumnus and a staff member, was appointed President of Guelph University last spring.

Sickness in Canada's health system

by Dr. Daniel H. Osmond

Dr. Osmond is an associate professor in the Departments of Physiology and Medicine at U of T.

One of the least lamented casualties in the federal government's battle of the budget was a relatively obscure item called funds for medical research. Barely a whimper was heard from the public when these funds were frozen last December.

But within Canada's universities it was a different story. Disbelief gave way to anger as distinguished scientists from all over the country, headed by Dr. Gordon Forster of the Hospital for Sick Children, held an emergency meeting. The atmosphere was one of siege. This much was clear: the financial noose was firmly in place. Inflation would steadily complete the strangulation.

Is it really as serious as all that? In this economically insecure climate, troubled by the provocative demands of self-centred groups, what taxpayer might lend a sympathetic ear to the pleas of those already perceived as privileged?

Altruistic as it may seem, the medical researchers' concerns are not selfish. We are not asking the public to endorse higher salary scales or shorter working hours. These are not the issues. What we desire is that there be a clearer understanding of the research enterprise, how it benefits Canadians, and how it presents a unique paradox: it thrives not only the present and future, but also the investments of the past. For medical research, like the human body it explores, is a complex, organic thing. It cannot be starved, and then instantly restored to full vigour when necessity and political expedience converge once again.

The quality of medical care is unmistakably and unequivocally intertwined with the quality of both medical education and medical research. However, as recently as 1966, Canada's standard of health care was slipping dangerously close to second rate level. Four of Canada's medical schools were in danger of losing their accreditation as teaching hospitals, primarily because they had not been successful in attracting or developing high calibre teacher/researchers. In practice, such individuals are found in schools that foster a proper balance between research, teaching, and health care. Says Dr. Malcolm Brown, President of the Medical Research Council:

"The effect of research on the quality of teaching and on patient care is evident in the ways in which patients seek out teaching hospitals for treatment. The evidence supports the view that there is a positive relation between the amount of research, the quality of teaching, and the amount learned."

Most Canadians have rising expectations of quality health care, and, as with their American neighbours, they are increasingly inclined to sue doctors or hospitals when they feel they have been let down. Yet, it is difficult to defend the very portion of the health care budget – minuscule at the moment – which can enhance quality. The explanation for such inconsistency appears to be ignorance about the research process, and about Canadian scientists and their accomplishments.

Medical research seeks to understand normal body structure and function, and how these are disturbed by disease. Such understanding underpins rational treatments for various ills, just as a mechanic has to understand the workings of a car in order to fix it when it breaks down. Basic research is concerned with fundamental aspects such as the structures and chemical interactions of the components of cells that make up living tissues. Health care delivery is concerned with the application of such knowledge at the bedside. You can't have one without the other. In fact, it's often

earliest to get hurt are the technicians, graduate students, and, of course, the research program itself. The mostly non-unionized technicians whose academic qualifications equal or surpass those of many high school teachers, fail to get the salary increments that would help them catch up to the well-qualified workers and professional persons. Worst of all, a depressed climate prevails – wherein many doubt the viability of their chosen career. The morale of graduates in the ten-year pipeline of training for research plummets as the market dries up, and many opt out. Specifically, for instance, if Susan Smith finds out in third year university that research funding is drying up, she decides against graduate school, and a potential Ph.D. rookie researcher is instrumentalized five years from now.

Why has a lofty enterprise devoted to the health needs of Canada become so lean and vulnerable?

Budget frozen at recommended levels

The federal government through various agencies and departments provides 70 percent of extramural funds available from all Canadian sources for biomedical research. Almost 75 percent of these funds are provided through the Medical Research Council, which after several years of real growth (an average yearly increase of 5.1 percent for 1971-1974 inclusive) is having its budget frozen. The overall effect of the current freeze is expected to reduce new grants from 160 to 60 in the coming year; increase terminal awards from 90 to 200; reduce total grants from 1300 to 1200, and result in the loss of 400 to 700 jobs, primarily those of technicians.

The cost of the health industry in Canada is estimated at \$6-7 billion. The 1974-75 MRC budget of \$42.86 million is about 0.5 percent of that amount, a pathetic figure for research and development by industrial standards, particularly when it is realized that only \$32.53 million of that was made available for the total grants program, with the remainder designated for various research related awards and promotional activities. Yet, over 10 years ago, the Gandy report suggested \$80 million as reasonable federal support for medical research during 1969-70. Another government report has recommended that by 1980 Canada should be spending 2.5 percent of its GNP on overall scientific research and development, though at present, the figure is only 1.27 percent.

hard to tell where one begins, and the other ends.

Most research is done in university faculties of medicine or in the research establishments of teaching hospitals, variously founded research institutes and commercial laboratories. A typical university research unit consists of a senior investigator, usually accompanied often by a full-time member of faculty, and, if times are good enough, one or more research technicians (usually university science graduates), one or more graduate students, and in some cases a Post-Doctoral "fellow" gaining further research experience. Most or all of these are likely to be supported financially from the investigator's research grant – for which the investigator must come up with over \$100,000 – and when funds for medical research are curtailed and the competition stiffens, even deserving programs get less, or nothing.

Medical research is done by a few, mostly non-unionized people, withdrawal of whose services is of relatively small immediate political or social import. It is often done in the rather plush surroundings of prestigious buildings put up by capital funds in expansionist, bygone years. Furthermore, research is expensive. Most items of equipment or supplies are in the highly specialized, high volume, high-cost categories. Many complex and expensive instruments are in the \$5,000-\$10,000 range. And the work itself is labour intensive. The annual cost input per laboratory is startling – just two graduate technicians, salaries with overhead, can consume \$20,000. So the operating budget easily escalates to \$30,000 per annum, even for a modest operation.

The researcher's public image is another problem. Most of Canada's

federally supported medical research is done by university researcher/teachers. Since, theoretically, each of these functions is done part-time, the teaching component may appear to be light, and the public's image of academic "fat cats" is reinforced. Nor is it always easy to communicate complex scientific matters to the general public: the necessary oversimplification tends to irritate critical fellow scientists, and spoil one's image within the "fraternity".

There is, moreover, a public ambivalence about science. Many feel threatened by the dangers posed by science and technology, be they military, environmental or even medical. They feel, perhaps vaguely, that until individuals or nations can be relied upon to make only beneficial choices, the scientific prowess at their disposal should be curtailed.

Finally, people are conditioned to respond to practical requirements in a direct practical way. They do not see why so much research, done on a go or without guaranteed returns or expected direction. If you need more doctors or scientists, train them; if you need a miracle cure, find it. It's as simple as that. Such an appealingly practical approach to research can, paradoxically, lead to waste, because it presupposes that the more you invest, the speedier and greater will be the reward. Richard Nixon's immensely expensive, wasteful war on cancer is an outstanding recent example of the theory that money however it is spent betrays a lack of differentiation, both in research and development, and demonstrate how excessive political interference with research enterprise may lead to waste rather than to the desired savings.

Basic research is an exploration of the unknown – like playing "hide and seek" – and is unpredictable. Development, on the other hand, proves or amplifies what's already been found. This is a more predictable game in which the output should correlate well with the input of money, manpower, and organizational skills.

The entire history of medical progress substantially supports differentiation between these two types of research, of which we can be fond, but not the other. And it's possible to argue cogently that some discoveries cannot be made, regardless of the investment, because the necessary groundwork has not yet been done. For instance, the momentous discovery of penicillin – essentially "accidental" – first required development of whole sciences of microscopy, microbiology, infectious diseases, and pharmacology. It would have been impossible to predict at the outset that advances in optics and microscopy would permit the identifica-

tion of bacteria, against which an antibiotic called penicillin could then be recognized.

As knowledge progresses, new complexities concerning every human body system are perceived, revealing the inadequacies of earlier concepts. This is a consistent, well-proven observation. Indeed, the generative potential rather than the finality of a discovery, is frequently the basis of Nobel Prize awards.

Paradoxically, it is the very mind-boggling complexity of knowledge — the seeming endlessness of the information explosion — that sometimes discourages further research. Even dedicated researchers have been known to recoil from ever-mounting piles of unread literature and feel tempted to stop producing more. Three principles help resolve this problem. First, complex and voluminous frequently becomes confused with the introductory period which antecedes a breakthrough; it's a sort of wallowing in the trough before being elevated onto the crest of the next wave. Second, what is confusing to one individual may be very illuminating to another, who approaches the data from a different perspective. Third, research survives the generation that produced it; it is an investment in the future.

The protection of a vulnerable public from an incredible number and variety of fraudulent or misguided pseudo-scientific treatments for almost any illness is one product of medical research. Among my circle of acquaintances I have been most deeply surprised by the gullibility in health matters, ranging from addition to expensive health foods or megavitamins, to the glibly-debunk of proliferating far-eastern mystics. Those of course, there are the spectacular headline scandals like today's cancer drug, Laetrile (*Maclean's*, Jan. 1976), or Krebiozen, the endall multimillion dollar cancer cure of 20 years ago who deceived prominent medical men, politicians, and thousands of the American public, who maligned the American Medical Association and the Division of Medical Sciences of the National Research Council for standing firm on scientific evidence against Krebiozen's effectiveness.

drugs, organ transplants, and open heart surgery.

It has often been said that prevention is the cheapest medicine of all. The daily cost of an active treatment bed, standard ward accommodation at the Toronto General Hospital, is \$140. Add to this the cost of physician's fees and of drugs. Every day someone doesn't spend in hospital saves the taxpayer a lot of money. Estimates suggest that 50,000 Canadian lives have been spared by polio vaccines alone, since 1955, with annual health care savings of \$200 million — at least four times the total present MRC budget.

Sharper diagnoses, made possible by sophisticated tests hot from research labs, also reduce hospital time, making more rapid and effective treatment possible. Relative to such savings research costs are piling up and pre-paid many decades in advance.

Medically, what matters is not only what can be done, but also how it is done, in terms of speed and effectiveness. For instance, traumatic injuries such as result from motor accidents, exact a terrible annual toll in Canada. Quick and accurate replacement of lost body fluids, blood pressure correction, and wonder drug control of infection make a world of difference to survival. The crucial roles of orthopedic and plastic surgeons ensure a more pleasant, productive return to normal living. All these procedures are rooted in basic research.

A good example would be open heart surgery, a procedure picked by a very select group of physicians and surgeons as one of the top clinical advances since 1945. Superficially, this technique — much admired by the public to whom it has been dramatized in television shows — is purely surgical. The cardiac surgeon is the obvious hero. Careful study however, has identified 25 distinct bodies of fundamental knowledge on which open heart surgery is based, including anatomic and radiologic protocols, fluid, electrolyte and acid-base balance, resuscitants, intravenous feeding, antibiotics, and blood groups. Obviously, open heart surgery, a quality health care procedure, is directly dependent

lower per capita cost. This disregards the nature of the beast. After all, knowledge — what the teacher has to teach — derives from research. By doing research the teacher not only participates in the creative process, but also maintains a feel for the reliability and relative importance of scientific facts. Further, a full-blended participant in the creation of knowledge is more likely to stay fresh and updated, and be a better importer of medical advances from abroad.

for advanced training because our own centres are second rate, or non-existent — as happened most of the time until a few years ago — in effect asks American or European taxpayers to educate our scholars.

Research is not a predictable enterprise, such that Canada could look automatically to the U.S. for instance, for a particular medical advance it needs. Research is done by people with individual insights, who, looking at the same sets of facts, may draw differing conclusions.

The would-be investigator must serve an apprenticeship. If not here, then somewhere else.

Since scientific knowledge is based on research, the would-be investigator must serve an apprenticeship learning to test experimentally the validity of what is taught. If a relatively healthy wire were to surrender their research function, students would continue their demand to learn at international standards, and flock to where opportunities were available.

Ask any university science librarian — the knowledge explosion of the past few decades ensures that health science trainees have much more information to sift and distil than existed when Banting and Best discovered insulin. It is no easy task to graduate in health science with grades acceptable for graduate school. And those who do make it into graduate studies are in for nine or additional years of their initiative, creativity, laboratory skills, and general ability to compete and publish internationally.

For health science research, like hockey, is an international game in which standards are set by the best anywhere. To play successfully requires adequate preparation, equipment, money. Above all, the research enterprise needs society's approbation.

Instead, the "vibes", though clear, are discouraging. The young are opting out or looking elsewhere. "For the first time in 20 years," says one head of a medical science department in Toronto, "I would advise graduate students to leave Canada." Having emerged only recently from the scientific boondocks, having spent millions to establish a respectable national research effort, having retained more of her talented youth to train at home, and reversed the traditional brain-drain, Canada seems to be losing the will to maintain adequately, let alone build upon, those foundations.

Research as an expensive enterprise is a prerogative of highly developed, well-off nations like Canada. Shirking this responsibility turns Canada into a parasitic "cuckoo," a bird that lets other species hatch and nurture its young. Sending our university graduates abroad

sions for experimental verification. Thus, a Canadian who is no more brilliant than researchers abroad, may nevertheless discover something before they do for the benefit of all mankind, and many less well known examples.

Health research is not merely a matter of dramatic results, but also of environment. When you have researchers who are directly involved in discovery, whose teaching reflects the fact that they are abreast of international standards, several important things happen. Departmental and inter-departmental meetings ensure that this latest knowledge, which may be several years ahead of standard textbooks, gets shared by teachers and students alike. Academic colleagues are stimulated by direct example to add to their own knowledge to a degree within their own areas of expertise. And the benefits get fed directly into the teaching hospitals with which many researcher/teachers are affiliated because there is a free traffic between medical faculty and hospital.

At U of T, for instance, quite a few specialists have access not only to their hospital but also to a research laboratory nearby. The latest and best knowledge flows freely from laboratory to bedside, from bedside to community, from diagnostic to therapeutic, from medical techniques, or new insights on body function. By means of special lectures, society meetings, post-graduate courses, professional journals, the public news media or direct personal contacts, practising physicians learn to upgrade their patient care. Again, these activities have a common element running through them, namely, locally done research.

Those who downplay research show little inclination to give up no practical benefits. Only the cost is shunned, not the fruits. If Canadians want the high quality of health care they deserve, they must be prepared to pay for it. And a reasonable tab for medical research must remain prominently displayed on the invoice.

The proven record of successes includes insulin, vaccines, antibiotics, and open heart surgery.

Make no mistake about it: the scientific community is the only reliable watchdog that can be on the one hand guard against cruel financial exploitation, such as profitability, and on the other offer hope for the future based on an impressive proven record of numerous successes, including insulin, vaccines, antibiotics and other wonder

drugs, organ transplants, and open heart surgery.

ent on the fruits of decades of research in many fields of knowledge. The surgical skill undoubtedly existed long ago, but it could not be usefully applied without adequate back-up.

Superficially, it may seem that if the teacher is not required to do research, extra time will be available to teach more students at a

For basketball, a middy and bloomers

by Paul Carson

The status of women's athletics has advanced considerably since the time 40 or 50 years ago when the absence of a compulsory athletic fee required that organizers utilize such activities as dances, candy sales, theatre nights and the operation of parking lots at men's inter-collegiate football games to generate income sufficient to run the women's program.

Prof. Anne Hewett, director of women's athletics since 1968, surveyed the growth of the women's program prior to 1940 in an after-dinner speech delivered at the first University-wide women's athletics awards banquet, March 24 in Hart House.

Plans for a women's athletic building were discussed as long ago as 1925, Prof. Hewett said, but in the next year it was decided that the imposition of a compulsory athletic fee "would cause irritation," and despite numerous subsequent discussions and votes of approval, women's athletics lacked a permanent home until the Benson Building was opened in 1959.

Minutes of long-forgotten meetings reveal that in 1927 the women, albeit with some reluctance, joined a move by McGill to ban male coaches from women's inter-collegiate sports. In the same year, there was a fierce reaction to a somewhat timid suggestion that the women might adopt men's rules in basketball — so strong a reaction that the women's associations upheld until 1966 the decision to use separate rules.

And for many years, chaperones were considered a necessity whenever a women's team travelled out of town for a weekend tournament.

Two other recurring themes, as reflected in the directorate minutes, were the delicate question of uniforms and what one member in the mid-1930s termed the fear of placing too much emphasis on "the public contest".

In 1923, the appropriate uniform for a woman basketball player was established as bloomers, royal blue middy, a tie, hairband, black shoes and stockings.

In 1937, this uniform was modi-

fied somewhat, to a tunic, knickers, a white mesh shirt and blue socks.

1937 also saw a heated debate concerning proper attire for women swimmers. The directorate ruled that a short skirt must be added to the basic swimsuit because the suit was "very thin and might cause some criticism..." especially at a mixed meet. Following protests from the swimmers, the design was modified and an inner apron replaced the outer skirt.

Prof. Hewett explained that in the years prior to 1959, the women's program benefitted from financial and other assistance provided by the men's association.

As one example, she cited the willingness of the men to provide the use of the Hart House gymnasium and pool for women's inter-collegiate events and many intramural championships. In view of the restrictions on use of the facilities contained in the Hart House deed of gift, the co-operation from the men's athletic association was very generous, Prof. Hewett said.

She also noted that when the compulsory athletic fee was instituted in 1937, the men's association each year donated a percentage of its revenue to assist the women's program. However, the opening of the Benson Building significantly altered this relationship: in the early 1920s the women had asked for use of the Hart House gymnasium so that their basketball games could be played on a "regular basis" and perhaps attract more spectators. Sixty years later, she said, the men's basketball team made a similar request "in virtually the identical wording" for use of the main gymnasium in the Benson Building.

Fraternities

continued from page 5

as \$40 to join. And if a student lives in the frat house instead of in residence or in an apartment, considerable money can be saved. But the fact is that most of those who consider joining are not going through university on their own earning power, so that if Mum or Dad isn't willing to help out a little, fraternity membership becomes an unnecessary luxury.

Fraternity men and women feel they are maligned largely because they are unrepresented and unrepresented. One member of the late 60s admitted that he was often embarrassed about belonging to a fraternity even though he enjoyed the two years he lived there. "People thought we were a haven of conservatism. Because we couldn't defend ourselves against a myth, we had to live with it."

Dave McIntry, an undergraduate Alpha Delta Phi, was the president of the Initiators of the revival of the Interfraternity Council. He says that one of the Council's aims is to dispel some of the myths about fraternities. "They are not private school heavens, or rich boys' retreats," he insists. "A frat house is a home on campus, and the brothers are your family."

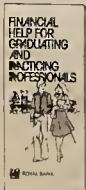
And, like most homeowners in Toronto in recent years, the frats have made a killing on their houses. When University expansion forced most to relocate, they made the best of it. Beta Gamma, Beta Ross Arnold says his family sold its house on Bloor Street for \$160,000 and bought another on Madison Ave. for \$145,000. According to Dave McIntry, Alpha Delta Phi obtained their house 12 years ago for \$90,000, and it's now valued at \$300,000. Alpha Phi was recently bought out by a developer and purchased a house on prestigious Admiral Road with the money — and there was enough profit left over to provide a nice little income for the future.

However, in spite of any financial gains they may have made by moving off campus, most fraternities suffered an overall decline shortly after they were excommunicated. The loss of interest by students, combined with increasing property taxes, stricter municipal laws, decreasing alumni support, and a generally indifferent attitude on the part of the University has rendered most fraternities weak and financially precarious.

Although students today are less antagonistic towards the notion of an elite "social club" than they were eight years ago, there are so many extracurricular rooms, residences, recreation rooms, bars and dances on campus (to say nothing of the entertainments provided by the surrounding city), that fraternities simply aren't needed any more.

But don't suggest that to an active member. He will tell you that fraternities are alive and well — and just around the corner from a renaissance.

It's no good having a shingle if you don't have a roof.



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THE UNIVERSITY OF TORONTO

A Commemorative Issue

After repeated requests, the Heritage Collection will release a special University of Toronto Commemorative Issue from its collection of original Canadian sketches. This Commemorative Issue is the work of R. Bruce Walker. Prints may be ordered individually or in sets of seven as shown. Each print measures 15 x 12 inches and has been beautifully reproduced with black ink on white leatherette cover stock. This is a limited edition and is available only through the Heritage Collection offices at the address below.

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Skinny dips and afternoon tea at Go Home Bay *continued*

the club house were \$4 a week; board without room \$2.50.

According to the terms of the Club charter, no one could own land unless a "graduate, undergraduate or official of the University of Toronto." One member recalled the vivid impression made by the first glimpses of rocks and pine trees and the white tents with the University pennant flying from the pole.

The Methodists of Victoria College largely got away from drinking. Entertainment was fishing, canoe trips, picnics, sing-songs. Morning bath might be a skinny dip in the lake, yet there were formal afternoon teas, with white tablecloths and silver carefully transported from the city. Many cottages had maid's rooms, and one governess insisted on sleeping with an umbrella over her head for fear a field mouse would drop down from the rafters.

Names of early settlers include Profs. Bain, Brebner, Fraser, Keys, Mavor, McPhedran, van der Smissen,

Rosebrugh, Ballantyne, deLury, McCurdy, Richardson, Robertson, Robinson, Spottow and Sutherland. There was J. Wilton Morse of yachting fame, who invented the 12-foot dingy specifically for Georgian Bay, and anticipated competition among naval architects. 70 years when he built an Asaph house, called a shingled tent, that still stands. Other scientists were Sir Frederic Sturtevant, who contributed to the birth of Standard Time, and B.A. Bentley, who ran the biological station that was one of the early projects of the Club.

Provisions had to be brought in entirely by boat. During the first summer the food ran out at one period and for three days the menu consisted of cornmeal and blackstrap. Profs. London and Keys covered 18 miles to Penetanguishene in a rowboat for more supplies. At the first club house breakfast, a guest created a sensation by asking for cream for his porridge. Eventually, a

cow was brought up by tug and the only person found to be proficient in milking was Chancellor Burwash.

To us and to their descendants, Prof. London and Keys must now seem in the fading photographs like crusty old Victorian patriarchs. They wore old city clothes at the bay in those days, the ladies prim in their

straw hats and parasols. Actually, of course, for the most part they were young men in their prime. They had to be. After all, who else but the Methodists of Go Home Bay, could one attend an outdoor church service and have to remove a rattle curved on the wooden bench that served as a pew?

Career counselling course

If you are presently working and if you —

* think there must be something more in working life for you,

* wonder if you can risk a career change,

* change jobs too often or too seldom, or

* are turned off, frustrated, blocked or bored at work:

then you will be interested in this

course for University of Toronto Alumni, to be offered on ten Wednesday evenings beginning in early October, 1976.

The purpose of the course is to provide an opportunity for you to:

1. explore and understand yourself in relation to your present and future work,
2. plan,
3. take action.

Through a variety of education methods, we will ensure that each participant deals with his or her own situation.

The course is co-sponsored by the University of Toronto Alumni Association, the Career Counselling and Placement Centre, and the Department of Alumni Affairs. Look for further information and registration forms in the July Graduate.

Innis much?

Innis would like to inform those graduates of professional faculties who spent a year or more at Innis College that they are also considered Innis Alumni and, when so accredited, are invited to participate in the Innis College Alumni Association.

If you haven't been receiving information about Innis and you would like future mailings, please contact:

Ms. Pat Burchell,
Secretary, Innis College Alumni
Association,
3208 Yonge Street, Apt. 4,
Toronto, Ontario M4N 2L2

How much energy do we need to enjoy life?

WE DRIVE big cars, use throw-away products, flick on heating and air conditioning switches with thoughtless abandon. We're on an energy binge and shortages are inevitable if we don't cut back on our growing consumption.

That's one argument for conservation. There are others: soaring capital costs, environmental impact, social distortion...

THE SIMPLE TRUTH is that we cannot live in the future as we have in the past. If we continue to gobble up energy at recent rates of increase, we'll need twice as much of it just 12 years. *We won't have it!*

In terms of oil and gas production, our best years appear to be behind us. Most of our relatively accessible hydro-electric sites are now in use. Coal deposits are difficult and costly to develop. Other forms of energy—biomass, solar, wind and nuclear for example—will have a role to play, but can't be depended upon to solve all our problems.

Conservation is the only energy option open to us which can work quickly and at low cost.

The goal: a saving of 40% by the year 2000.

A 20% cut in projected consumption by 1985 is a saving equal to 75% of

our current oil imports. A 40% reduction by 2000 equals the output of 10,000 conventional oil wells or 55 nuclear stations.

This will not mean drastic changes in lifestyle. It's possible with modest savings in daily living, industry and transportation.

Is all our consumption and convenience really worth the price?

Other countries seem to have found comfortable standards of living without extreme energy consumption. In Sweden, a highly-industrialized country with a climate and living standard like ours, they use one-third energy per person than we do.

France, Germany, Finland, the United Kingdom, Denmark and Italy all use less than half our energy per person.

By saving energy we can not only avoid future shortages but also improve our quality of life.

Efforts to lower consumption—through smaller cars, more mass transit, better built homes, more efficient industry, less waste production, more personal effort—will all save energy. And help our environment. And help to fight inflation. And help to make us more self-reliant and appreciative of simple pleasures.

In short, energy conservation can improve our overall quality of life.

Yes, it will take some effort because we've grown accustomed to waste. But is there any sensible alternative? If you're not part of the solution, you're part of the problem.

Get involved

with energy conservation.

Keep in touch with developments in the energy field. Find out how you can promote and encourage conservation in your community and through your profession. Add your name to the mailing list for the *Energy Conservation Newsletter*. Free when you send in this coupon.

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Ministre

Happy birthday



Next year on March 15, 1977, the University marks 150 years since receiving a Royal Charter from George IV. Celebrations for the Sesquicentennial will begin in January and continue throughout the spring and fall of 1977.

Special events are being planned with the view to acquaint the public with the campuses—St. George, Scarborough, and Eridge— and the University's resources.

Ontario's Lieutenant Governor, Pauline McGibbon, former U of T Chancellor, heads the 28-member Sesquicentennial Council. The symbol for the 150th anniversary has been created by Allan Fleming, the noted graphic designer responsible for the City and Ontario Hydro symbols. He has combined a contemporary "U" and "T" with a 19th century script and the dates "1827-1977".



Energy, Mines and Resources Canada
Gouvernement du Canada
Gouvernement de la Conservation de l'énergie
Ministère

A 20% cut in projected consumption by 1985 is a saving equal to 75% of

COMING EVENTS

15

APRIL

April 2, 3, 9, & 10 "THE MINES OF SULPHUR" Opera by Richard Rodney Bennett. Bistro by Beverly Cross. MacMillan Theatre, Edward Johnson Building, 8 p.m. Tickets \$3.50, students & senior citizens \$2. Box Office: 978-3744.

Saturday, April 3 NOON HOUR CLASSICAL CONCERT Oiane Oki, piano, Beverly Schroeder, violin. Hart House Great Hall.

April 5 to 30 SELECTION OF PAINTINGS, SCULPTURE, PHOTOGRAPHS AND CERAMICS by students in the Erindale College-Sheridan College combined art education program. Erindale College Art Gallery, South Building, Monday to Friday, 9 a.m. to 9 p.m., Saturday and Sunday, 2 p.m. to 5 p.m.

Tuesday, April 6 "EXPLORATION IN THE APENINE OPHIOLITES OF ITALY" Lecture by Dr. S. Homes, Department of Geology. Mining Building, Room 130, 170 College St., 4 p.m.

April 6 to 23 HART HOUSE ANNUAL ART EXHIBITION Mondays: 11 a.m. to 9 p.m.; Tuesday to Saturday: 11 a.m. to 5 p.m.; Sundays: 2 p.m. to 5 p.m.

Wednesday, April 7 "THE FINE ART OF CHOOSING: THEORY AND PRACTICE" Lecture by Prof. Andrew Cunningham. New College, 7:30 to 9 p.m.

CONCERT: ELIZABETHAN AND FRENCH SOLOS ON THE VIOLA DA GANBRA AND HARPSICHORD: A BACH SONATA AND MONTEVERDI ARIAS. ROM, Bishop White Gallery, 5:30 p.m. Free.

UNIVERSITY OF TORONTO CONCERT CHOIR & UNIVERSITY SINGERS Featuring John Beckwith's "The Sun Dance" Walter Hall, Edward Johnson Building, 8:30 p.m. Tickets \$2.

April 9 and 10 OPHTHALMOLOGY Annual Refresher Course for Specialists, Main Lecture Theatre, Toronto General Hospital. Applications to Postgraduate Medical Education, Medical Sciences Building. Fee \$85.

Sunday, April 11 SCARBOROUGH BOARD OF EDUCATION CONCERT Scarborough College Meeting Place, 3:30 p.m. Free.

April 22 to 24 LIBRARY SCIENCE COURSE IN COMPUTER-BASED REFERENCE SERVICES For information call School of Continuing Studies, (416) 978-2400. Fee \$65.

April 22 to 24 "SOCIALIST DEVELOPMENT IN TANZANIA SINCE 1967" Conference under the auspices of the International Student Program of the U of T. Galbraith Building Council Chamber, Room 202, 9 a.m. to 4 p.m.

April 23 to May 7 AN EXHIBITION OF CHINESE WATER COLOURS BY MA SHIO YU Scarborough College Meeting Place Gallery.

Saturday, April 24 LAST OF THE NEW MUSIC CONCERT SERIES Walter Hall, Edward Johnson Building, 8:30 p.m. Tickets \$3.50, students \$2.50. Call 967-5257.

Sunday, April 25 THE SCARBOROUGH SYMPHONY Conducted by Donald Coakley. Scarborough College Meeting Place, 3:30 p.m. Free.

CHAMBER MUSIC CONCERT by the Royal Conservatory Trio. Royal Conservatory of Music Concert Hall, 273 Bloor St. West, 5 p.m. Tickets \$3.

April 27 to May 14 MICHAEL OURHAM London, Ontario, abstract painter. Hart House Art Gallery. Mondays: 11 a.m. to 9 p.m.; Tuesday to Saturday: 11 a.m. to 5 p.m. Sundays: 2 p.m. to 5 p.m.

Wednesday, April 28 LECTURE BY PROF. J.E. CRUISE, Director of the ROM. Victoria Women's Association. Wyndwood, Victoria College, 150 Charles St. West, 2 p.m.

"CHANGE - AS WE SEE IT AT THE UNIVERSITY OF TORONTO" Chancellor Dr. Eva Macdonald, The Annual Meeting of the Household Science Alumnae Association, Lillian Massey Building, 157 Bloor St. West, 7:30 for dessert and coffee.

April 29 to Sept. 8 AN EXHIBITION OF THE WORK DONE DURING THE PAST NINE YEARS AT THE DEPARTMENT OF ARCHITECTURE 230 College St., 9 a.m. to 6 p.m. weekdays only.

MAY

Saturday, May 8 PEDIATRIC OTOLARYNGOLOGY FOR THE PRIMARY CARE PHYSICIAN One-day conference sponsored by the Postgraduate Medical Education Department, Faculty of Medicine. Large Lecture Theatre, Hospital for Sick Children. Registration \$15 p.m. Fee \$50.

Sunday, May 16 DONALD MCMURRICH MEMORIAL CONCERT Walter Hall, Edward Johnson Building. 8:30 p.m. Free.

Monday, May 17 SPRING CONVOCATION Faculty of Medicine, Convocation Hall, 2:30 p.m.

May 17 to 20 HEARING MEASUREMENT AND CONSERVATION A four-day workshop. For applications call School of Continuing Studies, 158 St. George St. (416) 978-2400. Fee \$140.

May 18 to 29 "A BICENTENNIAL MEANDER" A guided visit to historic cities, towns and hamlets in the eastern United States. Alumni Breakaway Tours. For information call (416) 864-1354.

May 25 to 28 OPERA EXCERPTS BY STUDENTS IN THE OPERA DEPARTMENT MacMillan Theatre, Edward Johnson Building, 8 p.m. \$2.

Friday, May 28 SPRING CONVOCATION Faculty of Dentistry. Convocation Hall, 2:30 p.m.

JUNE

June 8 and 9 SPRING CONVOCATION Graduate Degrees. Convocation Hall, 2:30 p.m.

June 10 to 16 SPRING CONVOCATION Education, Music and Arts & Science Degrees. Erindale, Innis, New Trinity, Victoria, Scarborough, St. Michael's, University and Woodswoth Colleges. Convocation Hall, 10:30 a.m. and 2:30 p.m.

SUMMER COURSES

June 21 to Aug. 13 RUSSIAN SUMMER WORKSHOP Applications for admission may be had from Prof. Irina Erevikow, Sidney Smith Hall, (416) 978-2304. Application deadline April 15.

July 4 to 16 EARLY MUSIC WORKSHOP Instrument making, master classes, private lessons, concerts and recitals, mixed ensembles. For information write Timothy J. McGee, Scarborough College, 1265 Military Trail, West Hill, Ontario. Fee \$100.

July 5 to Aug. 20 SUMMER LANGUAGE INSTITUTE French and Italian Program. The Latin and Augustan Civilization Program. For information contact School of Continuing Studies, 158 St. George St., (416) 978-2400.

July 5 to Aug. 27 ROYAL CONSERVATORY OF MUSIC SUMMER SCHOOL For information call Gordon Kuhlmann, Director of Summer School, Royal Conservatory of Music, 273 Bloor St. West, (416) 978-3756 or 3797.

July 5 to Aug. 27 FRENCH LANGUAGE SUMMER SCHOOL 1976 Saint-Pierre et Miquelon, "France in North America." For applications call School of Continuing Studies, 158 St. George St., (416) 978-2400.

July 15 to Aug. 27 SUMMER SCHOOL IN SIENA, ITALY Degree courses in Fine Art and Italian. For information contact Woodswoth College, 119 St. George St. (416) 978-2405.

August 9 to 13 "THE FAMILY STUDIES" (HOME ECONOMICS) TEACHER AND CURRICULUM DEVELOPMENT For applications call School of Continuing Studies, 158 St. George St., (416) 978-2400. Fee \$60.



Programs of both four and six weeks' duration are offered at the French Language Summer School, Saint-Pierre et Miquelon, during July and August. For applications contact the School of Continuing Studies, 158 St. George St., (416) 978-2405.

August 24 to 28 JOINT MEETING OF THE AMERICAN MATHEMATICAL SOCIETY AND THE MATHEMATICAL ASSOCIATION OF AMERICA For information call Annette Sunter (416) 978-5164.



Spring Reunion



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requests the pleasure of the company
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